

Warm-up

Wednesday 9/4

Simplify.

1. $4(z - 2) + 3z$

$$4z - 8 + 3z$$

$$\boxed{7z - 8}$$

2. $-5(y + 1) + 6y$

$$-5y - 5 + 6y$$

$$\boxed{y - 5}$$

3. $(f - 5)(-2) + 11f$

$$-2f + 10 + 11f$$

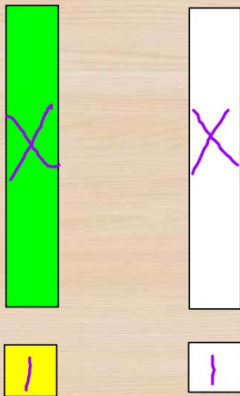
$$\boxed{9f + 10}$$

Today we will apply the distributive property.

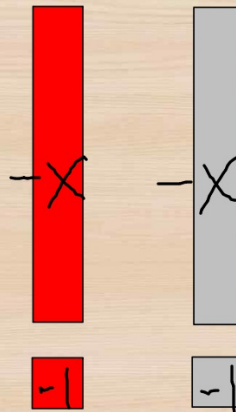
I can speak about the distributive property using: distribute, constant, variable, multiply, combine like terms, group.



Algebra tiles:



Represent
positive units



Represent
negative units

Draw using algebra tiles.

3 groups of $x + 2$

$$3x + 6$$

Draw using algebra tiles

$$4(x - 2)$$

4 groups of
 $x - 2$.

$$= 4x - 8$$

Draw using algebra tiles

$$2(5 - 3x)$$

$$-6x + 10$$

Distributive property states:

$$a(b + c) = ab + ac$$

$$a(b - c) = ab - ac$$

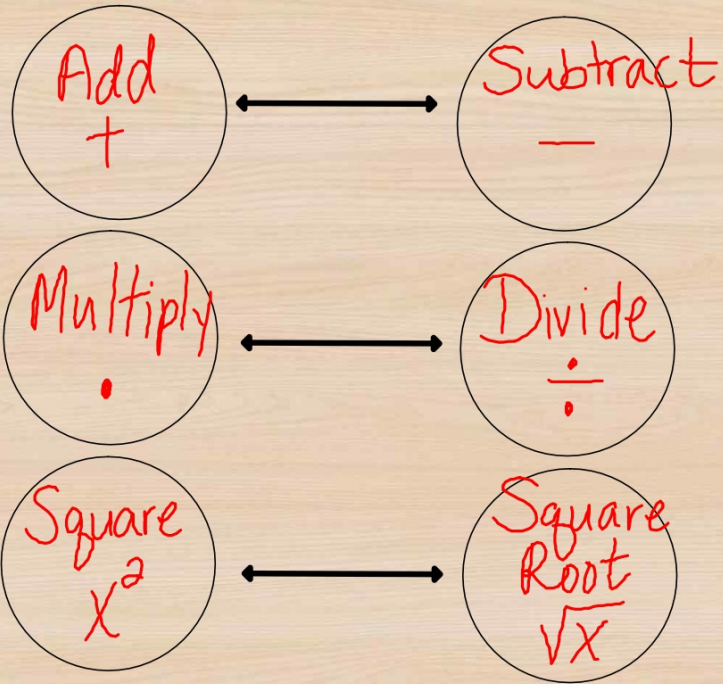
Use the distributive property to simplify the following:

1. $2(3y + 4)$
 $2(3y) + 2(4)$
 $6y + 8$

2. $3(4y - 5)$
 $3(4y) + 3(-5)$
 $12y - 15$

Opposite

Inverse Operations



$x - 3 = 5$
A number minus 3 is 5. Write and solve an equation to find the missing number.

$$\begin{array}{r} x - 3 = 5 \\ + 3 \quad + 3 \\ \hline x = 8 \end{array}$$

The product of 3 and a number is 21. Write and solve an equation to find the missing number.

$$\begin{array}{r} 3x = 21 \\ \hline 3 \quad | \quad 3 \end{array}$$

$$x = 7$$

A number divided by 4 is 7. Write and solve an equation to find the missing number.

$$\begin{array}{r} 4 \cdot \frac{x}{4} = 7 \cdot 4 \\ \hline x = 28 \end{array}$$

Seven less than a number divided by 3 is five.

$$\begin{array}{r|l} \frac{x}{3} - 7 = 5 & \\ \hline \frac{x}{3} - 7 + 7 = 5 + 7 & \\ \hline \frac{x}{3} = 12 \cdot 3 & \end{array}$$

$$x = 36$$

Eleven more than two times a number is 17.

$$\begin{array}{r|l} 2x + 11 = 17 & \\ \hline 2x + 11 - 11 = 17 - 11 & \\ \hline 2x = 6 & \end{array}$$

$$\begin{array}{r|l} \frac{2x}{2} = \frac{6}{2} & \\ \hline x = 3 & \end{array}$$